

Title (en)  
SEMICONDUCTOR DEVICE WITH MODIFIED CURRENT DISTRIBUTION

Title (de)  
HALBLEITERBAUELEMENT MIT MODIFIZIERTER STROMVERTEILUNG

Title (fr)  
DISPOSITIF SEMI-CONDUCTEUR À DISTRIBUTION DE COURANT MODIFIÉE

Publication  
**EP 3304594 A4 20180822 (EN)**

Application  
**EP 16803989 A 20160520**

Priority  
• US 201514726005 A 20150529  
• US 2016033413 W 20160520

Abstract (en)  
[origin: US2016351551A1] Semiconductor devices having modified current distribution and methods of forming the same are described herein. As an example, a memory die in contact with a logic die can be configured to draw a sum amount of current from a current source. The memory die can include a plurality of through-substrate vias (TSVs) formed in the memory die and configured to provide the sum amount of current to the memory die from the current source. The memory die can include at least two interconnection contacts associated with a first TSV closer to the current source that are not connected. The memory die can include an electrical connection between at least two interconnection contacts associated with a second TSV that is further in distance from the current source than the first TSV.

IPC 8 full level  
**H01L 25/065** (2006.01); **H01L 23/00** (2006.01); **H01L 23/48** (2006.01); **H01L 23/528** (2006.01); **H01L 23/538** (2006.01); **H01L 25/00** (2006.01); **H01L 25/18** (2006.01)

CPC (source: CN EP KR US)  
**H01L 23/481** (2013.01 - CN EP KR US); **H01L 23/5286** (2013.01 - CN EP US); **H01L 23/5383** (2013.01 - US); **H01L 23/5384** (2013.01 - US); **H01L 24/05** (2013.01 - US); **H01L 24/08** (2013.01 - US); **H01L 24/13** (2013.01 - CN EP US); **H01L 24/16** (2013.01 - CN EP US); **H01L 24/18** (2013.01 - US); **H01L 25/0657** (2013.01 - KR); **H01L 25/18** (2013.01 - CN EP US); **H01L 25/50** (2013.01 - US); **H01L 2224/05025** (2013.01 - US); **H01L 2224/08235** (2013.01 - US); **H01L 2224/13024** (2013.01 - CN EP US); **H01L 2224/13025** (2013.01 - CN EP US); **H01L 2224/131** (2013.01 - CN EP US); **H01L 2224/16141** (2013.01 - US); **H01L 2224/16146** (2013.01 - CN EP US); **H01L 2224/16235** (2013.01 - US); **H01L 2225/06513** (2013.01 - CN EP US); **H01L 2225/06517** (2013.01 - CN EP US); **H01L 2225/06524** (2013.01 - US); **H01L 2225/06527** (2013.01 - CN EP US); **H01L 2225/06541** (2013.01 - KR); **H01L 2225/06544** (2013.01 - CN EP US); **H01L 2225/06565** (2013.01 - CN EP US); **H01L 2225/06582** (2013.01 - CN EP US); **H01L 2225/06589** (2013.01 - CN EP US); **H01L 2924/1431** (2013.01 - US); **H01L 2924/1434** (2013.01 - US)

Citation (search report)  
• [A] US 2010013512 A1 20100121 - HARGAN EBRAHIM H [US], et al  
• [A] US 2011161583 A1 20110630 - YOUN SUN-PIL [KR]  
• [A] US 7554133 B1 20090630 - ALI ANWAR [US], et al  
• [A] JP 2012099716 A 20120524 - TOSHIBA CORP  
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• [A] US 6239495 B1 20010529 - SAKUI KOJI [JP], et al  
• See references of WO 2016196034A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**US 2016351551 A1 20161201**; **US 9559086 B2 20170131**; CN 107667425 A 20180206; CN 107667425 B 20191210; EP 3304594 A1 20180411; EP 3304594 A4 20180822; EP 3304594 B1 20191113; JP 2018516461 A 20180621; JP 6422599 B2 20181114; KR 101902142 B1 20180927; KR 20180003643 A 20180109; TW 201705369 A 20170201; TW I605545 B 20171111; US 10037983 B2 20180731; US 2017133359 A1 20170511; WO 2016196034 A1 20161208

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